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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/662,464 | 09/16/2003 | Nikolai Mansourov | 79470-13 /aba | 9623 |
| <div>7590 SMART & BIGGAR P.O. Box 2999, Station D 900-55 Metcalfe Street Ottawa, ON K1P 5Y6 CANADA</div> | | | <div>EXAMINER CHAUHAN, LOREN B</div> | |
| | | | <div>ART UNIT 2109</div> | <div>PAPER NUMBER</div> |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/662,464 | | MANSOUROV, NIKOLAI | |
| | Examiner | | Art Unit | |
| | Loren Chauhan | | 2109 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 6 is being objected to because of the following informalities:

Please change ----according of ---- to ----according to----

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 2 and 16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For the recitation of claims 2 and 16, the last two lines "**comment lines from said source file in a subsequent iteration of the method**" the specification does not enable one skill in the art how to make or use applicant's claimed invention. Is this test being done **before or after or at** the compilation process? The art rejections of this claim will be applied based on the Examiner's best understanding of the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1,3,4,9-12 and 15** are rejected under 35 U.S.C. 102(a and b) based upon a public use or sale of the invention. **Turbo C++ 3.0 User's Guide, Published in 1992 by Borland International Inc.**

4. **As per Claim 1, The Turbo C++ user's guide teaches** a processor implemented method of generating a build for a software product from one or more source-files, the method comprising:

- Processing each of the one or more source-files to remove comment lines (**In chapter 11, Lexical elements on page 351, Comments section paragraph 1**) from said source file to produce a respective compacted source file; and
- Compiling each of the one or more compacted source files to generate a new build of the software product. (**In Chapter 11, Lexical elements on page 351, Comments section**). It is inherent that compilers are compiling these compacted source files to generate a new build of the software.

5. **As per claim 3, a processor implemented method according to claim 1 adapted for use with C/C++ (Book title, page 1, para.4, lines 1-2, page 351).**

6. **As per claim 4, the processor implemented method according to claim 1 adapted for use with a programming language which supports modular program (also known as a object-oriented programming language) construction through compile time processing of the one or more source-files (Page 98, Fig. 3.5 shows how Turbo C++ is a modular programming).**

7. **As per claim 9, see the claim rejection as claim 1.**

8. **As to claim 10, Turbo C++** discloses the apparatus of claim 9 further comprising a code repository (memory) in which the one or more source-files and the respective compacted source-files are stored.

It is known in the art that any apparatus for building software needs a memory to store all the source files and to generate software itself.

9. **As per claim 11, Turbo C++** discloses the apparatus of claim 9 further comprising a preprocessor (**Chapter 11, Page 349, fourth paragraph**) for pre-processing each if the one or more compacted source-files before the compiler compiles (it is known in the art that compiler compiles all the source files).

10. **As per claim 12, Turbo C++** discloses the apparatus of claim 9 further comprises a preprocessor for pre-processing each of the one or more source files (**Chapter 11, Page 349, fourth paragraph**) before the comment extraction program removes the comment lines to produce the respective compacted source files (**In Chapter 11, Lexical elements on page 351, Comments section**).

It is known in the art that preprocessor does pre-processing before the compiler compiles the source files.

11. **As per claim 15,** see the claim rejection as claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2109

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 2, 5, 7-8, 13-14, 16,17 and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Turbo C++ 3.0 User's Guide** in view of **Bak et al. (Bak) US PG-PUB 10/121,875**.

13. **As to claim 2, Turbo C++ 3.0 User's Guide** has the functionality recited above, however, it fails to disclose: **"...for each of the one or more source files, a step of determining whether or not it is sufficiently beneficial to remove comment lines from said source file, and if it is not sufficiently beneficial not removing the comment lines from said source file in a subsequent iteration of the method."**

Bak discloses a determination test based on the memory usage by the system **(Para. 0015)** and removes the code that has not been recently used **(Para. 0008, line 3)**. Therefore Examiner is reading removing a method as comment removal.

Bak is evidence that ordinary workers in the art would find a reason, suggestion or motivation to add the determination step to reduce the size of the code based on the outcome of the step.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the compiler of **Turbo C++** by adding a determination step to reduce the code size of a source file **(Para.0015 as disclosed by Bak)**. Doing so would improve the performance of the system by reducing the size of the code of source file. **(As per examiners best understanding of the claim as written.)**

14. As per claim 5, **Turbo C++ 3.0 User's Guide** has the functionality recited above, however, it fails to disclose: **"...a step of counting comment lines in each of the one or more source files and the number of times each of the one or more source files and the number of times each of the one or more source files is included in another of the one or more source-files, wherein the step of determining whether or not it is sufficiently beneficial to remove comment lines from a particular source file is based on the number of comment lines in the particular source file and the number of times that particular source file is included in another of the one or more source files."**

Bak discloses a counter, which counts the method that has been garbage collected (**Para. 0011, Lines 10-11**). Also, **Bak** has a determination test based on the counter (**Para. 0053, lines 3-5**) to reduce the size of the code. Therefore, the Examiner is reading the garbage collection as removing the comment lines based on a determination test.

Bak is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use the determination test to reduce the size of the code based on a test.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the compiler of **Turbo C++** by adding determination step to reduce the code size of the source file (**Para.0015 as disclosed by Bak**). Doing so would improve the performance of the system by reducing the size of the code.

15. **As per claim 7**, Turbo C++ has the functionality as described above, however, it fails to disclose: “...**each of the one or more source-files generating comment expansion statistics, wherein the step of determining whether or not it is sufficiently beneficial to remove comment lines from a particular source-file is based on the comment expansion statistics for that particular source file.**”

Bak does not explicitly show that comment expansion statistics are being generated but it does show a counter, which keeps track of how many times a method was being garbage (**Para. 0010, lines 2-4**). It also has a determination test for each of the method being garbage (**Para. 0010, lines 4-7**). Therefore, the Examiner is reading a garbage removal counter as a generating a comment expansion statistics. Also, the Examiner reading removal of comment lines of a source file is based on the comment expansion statistics as a determination test is based on a counter (**Para.0015, last two lines**).

Bak is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use the determination test to reduce the size of the code based on a test, which is based on a expansion statistics.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the compiler of **Turbo C++** by adding a determination step based on a expansion statistics to reduce the code size of the source file (**Para.0015, last two lines as disclosed by Bak**). Doing so would improve the performance of the system by reducing the size of the code.

16. **As per claim 8**, Turbo C++ does not disclose that the comment statistics are being generated periodically for each of the one or more source files.

Bak does not explicitly show that statistics are being generated but it discloses that its system performs periodic garbage collection (**Para. 0053, lines 3-5**) and it keeps track of it how many times it does that (**Para.0011, last two lines**). Therefore, the Examiner is reading the periodic garbage collection as periodically generating comment expansion statistics.

Bak is evidence that ordinary workers in the art would find a reason, suggestion or motivation to create a periodic statistics for the code to reduce the size of the source file.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the compiler of **Turbo C++** by generating a periodic statistics for the source-file, as disclosed by **Bak**. So that based on the statistics one can reduce the size of the code (**Para.0054**).

17. **As per claim 13**, Turbo C++ discloses software product as recited above, however, fails to specifically disclose, “ **An extraction program adapted to remove each of the one or more source-files from the code repository**”.

Bak discloses software system, which is capable of removing methods from the memory (**Para.0015, lines 2-3**). Therefore examiner is reading **Bak**'s removal of methods from memory, as an extraction program is adapted to remove source files from the code repository (memory).

Bak is evidence that ordinary workers in the art would find a reason, suggestion or motivation to add this code repository removal feature to a software product.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the software product of Turbo C++ by adding the code repository removal feature disclosed by Bak. Doing so would reduce the size of the memory usage (**Para. 0016, lines 1-4**).

18. **As per claim 14, Turbo C++** discloses the software product with the comment extraction program (**Turbo C++ 3.0 User's Guide, page 351**) and Bak discloses the system with code repository (memory) with extraction program (**Para. 0015 as disclosed by Bak**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the software product of the Turbo C++ by adding Bak's feature of code repository with extraction program. By doing so would enable better memory management so additional freed memory can be used for other purposes (**Para. 0016 as disclosed by Bak**).

19. **As per claim 16**, see the same rejection for the claim 2 above.

20. **As per claim 17**, see the same rejection for the claim 5 above.

21. **As per claim 19**, see the same rejection for the claim 7 above.

22. **As per claim 20**, see the same rejection for the claim 8 above.

23. **Claims 6 and 18** are being rejected under 35 U.S.C. 103(a) as being unpatentable over **Turbo C++ 3.0 User's Guide**.

24. **As per claim 6**, Turbo C++ does not explicitly explain that a method according to claim 1 further comprising between the generation of successive builds, adaptively selecting which source-files to be processes for comment removal.

However, it is well known in the art that build are generated after each compilation. Also, compiler removes comments from source files (**In Chapter 11, Lexical elements on page 351, Comments section**). By doing so, it will reduce the size of the code and also saves some compilation time.

25. **As per claim 18**, see the same rejection for the claim 6 above.

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Easton (USAPT 6,574,792) discloses "Dynamically Generating Expanded user messages in a computer system" is considered pertinent in extracting of a various program components.
- Goiffon (USPAT 6,78,5882) discloses " Process-Driven tool interface for an object management system" is considered pertinent in code repository for the source files.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren Chauhan whose telephone number is 571-270-1554. The examiner can normally be reached on Mon.-Fri. 7:30-5:00 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Megnistu can be reached on 571-270-1550. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Loren Chauhan
Examiner
Art Unit 2109


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SUPERVISORY PATENT EXAMINER